

PATENT COOPERATION TREATY

TRANSLATION

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

Date of mailing **See form PCT/ISA/210**
(day/month/year)

Applicant's or agent's file reference

0000055339

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/EP2005/001231

International filing date (day/month/year)

08.02.2005

Priority date (day/month/year)

13.02.2004

International Patent Classification (IPC) or both national classification and IPC

C08F8/00, C08G81/02

Applicant

BASF AKTIENGESELLSCHAFT

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

Authorized officer

Facsimile No.

Telephone No.

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Box No. 1 Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language
_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-27	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	see below, point V.2.	NO
Industrial applicability (IA)	Claims	1-27	YES
	Claims		NO

2. Citations and explanations:

Reference is made to the following documents:

D1: WO 01/30882 A (AVECIA LIMITED; THETFORD, DEAN;
BARNETT, STUART) 3 May 2001 (2001-05-03)

D2: US 2004/007153 A1 (THETFORD DEAN ET AL)
15 January 2004 (2004-01-15)

1. Novelty

According to D1 and D2, it is likewise possible to obtain aqueous polymer dispersions (acrylate latex dispersions) which, as associative thickener, comprise amphiphilic polymers, with polyisobutene blocks and with hydrophilic units.

However, novelty is acknowledged in the current independent claims on account of multiple selection (polyisobutene from a list, content of terminally arranged double bonds)

2. Inventive step

As stated under point 1, the idea of using copolymers containing polyisobutene blocks alongside hydrophilic fractions (e.g. polyether blocks) for stabilizing aqueous latex dispersions is not novel (D1, D2).

The applicant should provide convincing evidence that the increased content of terminally arranged double bonds in the polyisobutene block (and the increased functionalization resulting therefrom) causes an unexpected technical effect. Since the material known as reactive polyisobutene (with an increased proportion of terminal double bonds) was known (as also was its modification with MAH for purposes of copolymer synthesis), it was obvious to a person skilled in the art that

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Box No. V

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this material could also be used for the abovementioned purpose; i.e. if the applicant had merely solved the problem of providing further stabilizers for the abovementioned purpose, that would not be inventive.

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

In the light of the description and of the experiments, an essential feature is missing in the independent claims: according to the current wording, the hydrophilic unit (B) can be composed of a single functional group, whereas according to the other parts of the application the inventive properties are achieved only with a block copolymer. The applicant should therefore define the hydrophilic unit (B) likewise as a block.